Subject Fields

In addition to the four common fields and the classification title, the classification system uses three *subject fields* that provide additional information regarding the intended experiences available to students enrolled, the main emphasis of the course, the type of credit received upon successful completion, and detail regarding the content of the course. Subject fields were designed to retain distinctions among courses that fit a single classification description, or to convey pertinent information that was not included in the descriptions. The following sections provide a general overview and examples of the subject fields for both ***vocational*** and ***academic*** courses.

Vocational Subject Fields

EXAMPLE: ACCOUNTING 1B

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
02	07	1	0.50	2	1	2	5	1

The three subject fields for all vocational courses are identically defined and coded. Subject field #1, entitled *Occupational Program*, can indicate whether the course is part of a larger sequence of courses that make up an approved vocational program as well as whether it is part of a tech-prep program. Subject field #2 in the vocational subject areas, *Applied Experience,* denotes the general type of applied experience that students receive during the course. Subject field #3, *Academic Integration*, portrays whether academic integration exists within the vocational course, specifying which of three academic subjects-math, science, communication, or a combination thereof-is explicitly taught within the course or in required "linked" courses. In the above example, the subject field codes of 251 for Accounting 1B identifies it as 1) part of an approved vocational program, 2) a course in which students practice the skills they are learning in on-campus laboratories or via classroom simulation, and 3) a course in which mathematic concepts and skills are explicitly taught within the course. The next three subsections present the options for these three subject fields and explain why they were selected.

Table 5 - Classification codes and meanings for the first vocational subject field: Occupational program

Codes	Code meanings
	(Indicates the programmatic nature of the course.)
0	Information not collected, unavailable, or missing.
1	This course is not (by itself or as part of a sequence of courses) designed to lead to entry-level positions or further specialized training in a particular occupation or set of occupations.
2	This course, by itself or in conjunction with others, is part of an approved

	vocational program designed to develop competencies required for specific career fields or continuing education.
3	This course is part of an articulated tech-prep program, designed to lead to an associate degree or certificate in a specific career field.

Occupational program. Many of the participating education systems have two types of vocational educational offerings. Some courses are part of vocational "programs," intending to lead students who complete these programs into entry-level positions within the specific vocational field. Other courses exist that offer vocational experience and information for students interested in the area, but who have aspirations other than to be employed within that vocational field. These other courses may provide an orientation to a cluster of occupations, or may provide an overview of the vocation, but are not designed to lead to entry-level positions or to additional postsecondary training in that field. The difference between these two types of courses is sometimes obvious, supported by differences in the teachers' training and in the organization of the vocational offerings. In other systems, the difference may be more obscure, or may not exist at all.

In addition, some vocational courses and programs are part of a tech-prep system or of articulation agreements between high schools and postsecondary institutions. The Perkins Act of 1990 authorized funding for planning and demonstration grants that would serve to link secondary and postsecondary education, and included definitions with regard to acceptable tech-prep programs. However, tech-prep and articulation between secondary and postsecondary institutions have existed for many years, and the legislation's definitions may go beyond some programs currently in existence.(8)(1) No matter the actual definition, the thrust behind most tech-prep programs is clear: secondary schools are cooperating and working with community colleges and other postsecondary institutions (as well as businesses that can provide apprenticeships) in order to smooth a student's transition from a high school vocational program to postsecondary vocational training or to gainful employment.

The articulation agreements recognize, for specified courses, the knowledge gained and the work completed during the students' high school careers. They provide continuity in learning, offer a planned sequence of courses that result in the necessary competencies required for a career or field of endeavor, and reduce duplication of learning experiences. Articulated agreements refer to specific courses or sequences of courses, and keeping track of which courses fulfill such an agreement has become more important. The proposed system will provide an indication of whether a course is part of an articulated tech-prep program. However, as useful as the information may be, the user is cautioned that different definitions of tech-prep programs exist.

Table 6 - Classification codes and meanings for the second vocational subject field: Applied experience

Codes	Code meanings
	(Indicates the nature of the applied experience.)
0	Information not collected, unavailable, or missing.
1	Students are required to work in an independent (public or private) business or organization in this occupation or field.
2	Students are given the opportunity to work in an independent (public or

	private) business or organization in this occupation or field, but are not required to do so.
3	Students are required to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus).
4	Students have the opportunity to work in an occupationally related business or project under school supervision (for example, auto dealership, cosmetology shop, or a student-built house on or off campus), but are not required to do so.
5	Students practice skills in on-campus laboratories or via classroom simulation.

Applied experience. The type of applied experience that students receive within a vocational course depends upon a number of factors: whether or not the course is part of an occupational program, the type of occupation being studied, the resources of the school, and the level of the course. (One might expect advanced students to have different experiences than students just beginning their coursework.) The classification system proposes a series of options that provide a rough indication of the applied experience that students enrolled in the course will have. Study staff designed the options with a hierarchy in mind; the choice of option 3 does not preclude in-class simulations. However, that choice would indicate that *all* students in the course are *required* to work in a school-supervised business or project. If students can choose to work in the shop, and are encouraged but not required to do so, option 4 should be chosen instead.

This discussion includes one caveat. Because of the course coding systems used by school districts or perhaps the evolution of the courses, schools often offer cooperative education or work experience opportunities in one of two ways. Some schools enroll students in vocational coursework as well as in a separate cooperative or work experience course. Others combine the two into one course. The first two options of the *Applied Experience* subject field are intended predominantly for those vocational courses offered by school systems in which cooperative education is embedded in the coursework. Those schools that offer cooperative or work experience as a separate course should use the course titles and codes that pertain to cooperative and on-the-job experience; each vocational subject area contains these types of courses. Again, this system describes the nature of each individual course, not the general experience of students who enroll in the course.

Table 7 - Classification codes and meanings for the third vocational subject field: Academic integration

Codes	Code meanings
	(Indicates which of the following subject area concepts/skills are explicitly taught within the course or in required linked courses.)
0	Information not collected, unavailable, or missing.
1	Mathematics
2	Life and Physical Sciences
3	English Language and Literature
4	Mathematics and Life and Physical Sciences

5	Mathematics and English Language and Literature
6	Life and Physical Sciences and English Language and Literature
7	Mathematics, Life and Physical Sciences, and English Language and Literature
8	Separate, required course covering mathematics topics related to occupation
9	Separate, required course covering science topics related to occupation

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Academic Integration. As noted throughout this report, subject matter integration has taken on a number of forms, and applies not only within academic courses but also between academic and vocational courses. Instructors may include academic lessons as an explicit part of vocational courses, wherein the teachers take more time to convey specific mathematical, scientific, or communication concepts and strategies related to the vocational content of the course. The Perkins Act of 1990 places an increased emphasis on including academic competencies within vocational courses, an emphasis that may or may not be reflected in the expectations and objectives of individual courses. In addition to schools that embed academic lessons within their vocational courses, some schools have designed particular courses (separate from the vocational courses, but to be taken in conjunction with them) that impart the mathematical, scientific, or language arts concepts and skills specific to and useful for particular occupations or vocations. The third vocational subject field, *Academic Integration*, provides the means for specifying the type of academic competencies that instructors explicitly teach and emphasize within each course.

Academic Subject Fields

Unlike the vocational subject areas, which share three identical subject fields to further describe the courses contained within them, each of the 14 academic subject areas has its own unique set of subject fields (see Table 17). For example, in Example 1, Example 2, and Example 3 presented below, the codes within the subject fields are identical; however, the numbers convey different pieces of information regarding the particular courses, because the subject fields of each subject area have a different definition.

EXAMPLE 1: U.S. HISTORY - COMPREHENSIVE

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	sequence yr	#1	#2	#3
27	21	2	1.00	0	0	1	2	2

The common codes of this course example, U.S. History-Comprehensive, indicates the following characteristics:

Within the Social Sciences and History subject area,	(subject area=27)
it fits the description of the classification title U.S. History-Comprehensive,	(course title=21 within subject area #27)

is taught at a basic level, and	(level=2)
awards one Carnegie unit of credit.	(credit=1.00)

The 122 code in the subject fields further indicates that the course fulfills a primary social studies graduation requirement; requires students to write monthly; and does not require students to use primary source materials frequently. In the Social Sciences and History subject area, the three subject fields correspond to Type of Credit, Frequency of Writing, and Primary Sources (whereas in all the vocational subject areas, the three fields correspond to Occupational Program, Applied Experience, and Academic Integration). This particular sequence of subject fields is unique to the Social Sciences and History subject area. The codes and meanings are provided below.

Table 8 - Classification codes and meanings for the first subject field in Social Sciences and History: Type of credit

Codes	Code meanings
	(If the school, district or state requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)
0	Information not collected, unavailable, or missing.
1	Primary Social Studies credit (Often, graduation requirements include specific types of social studies credit, such as World History, U.S. History, Government, Economics, and so on. This option signifies fulfillment of one of these specific social studies credit requirements.)
2	Secondary Social Studies credit (In addition to specific types of social studies credits, several school systems require additional coursework to fulfill graduation requirements. This option signifies fulfillment of one of these general or elective social studies credit requirements.)
3	Fine Arts/Humanities credit
4	Vocational credit
5	Dual credit (in Social Studies and another subject area)
6	Student choice (Student may choose between two or more types of non-elective credit to be received upon successful completion of the course)
7	Other type of credit
8	Elective credit

Table 9 - Classification codes and meanings for the second subject field in Social Sciences and History: Frequency of writing

Codes	Code meanings

	(Indicates, on average, how frequently students are required to write in this course.)
0	Information not collected, unavailable, or missing.
1	Less frequently than once per month
2	Approximately once a month
3	About every 2 weeks
4	Weekly
5	Daily

Table 10 - Classification codes and meanings for the third subject field in Social Sciences and History: Primary sources

Codes	Code meanings
	(Indicates whether students work frequently-at least once per month-with primary source materials.)
0	Information not collected, unavailable, or missing.
1	Students work frequently with primary source materials.
2	Students do not work frequently with primary source materials (although some assignments may include using them).

EXAMPLE 2: DRAMA/STAGECRAFT - COMPREHENSIVE

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	yr	#1	#2	#3
11	**12**	**1**	**1.00**	**0**	**1**	**1**	**2**	**2**

The coding of this example course, Drama/Stagecraft-Comprehensive, indicates the following:

Within Fine and Performing Arts subject area,	(subject area=11)
it fits the description of the classification title Drama/Stagecraft-Comprehensive,	(course title=12 within subject area #11)
is taught to a heterogeneous mix of students,	(level=1)
awards one Carnegie unit of credit, and	(credit=1.00)
is the first-year course in a multi-year sequence of Drama/Stagecraft courses.	(sequence=01)

The 122 code in the subject fields further indicates that the course fulfills an Arts/Humanities graduation requirement; does not require auditions for entry; and emphasizes public performance. In the Fine and

Performing Arts, the three subject fields refer to Type of Credit, Auditions, and Primary Emphasis. As with the Social Sciences and History subject area and fields, this particular sequence of subject fields with their associated meanings is unique to the Fine and Performing Arts subject area. The codes and meanings for the Fine and Performing Arts subject area are provided below.

Table 11 - Classification codes and meanings for the first subject field in Fine and Performing Arts: Type of credit

Codes	Code meanings
	(If the school, state or district requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)
0	Information not collected, unavailable, or missing.
1	Fine Arts, Humanities, or Performing Arts credit
2	Physical Education credit
3	Primary English credit (If schools/districts have several types of required English credit, and the course fulfills a Literature/Writing credit, this option should be chosen. This option should also be chosen by schools/districts with only one type of English credit requirement.)
4	Secondary English credit
5	Vocational credit
6	Dual credit (in Social Studies and another subject area)
7	Student choice (Student may choose between two or more types of non-elective credit to be received upon successful completion of the course)
8	Other type of credit
9	Elective credit

Table 12 - Classification codes and meanings for the second subject field in Fine and Performing Arts: Auditions

Codes	Code meanings
	(Indicates whether auditions are required prior to enrollment in the course.)
0	Information not collected, unavailable, or missing.
1	Auditions are required.
2	Auditions are not required.

Table 13 - Classification codes and meanings for the third subject field in Fine and Performing Arts: Primary emphasis

Codes	Code meanings
	(Indicates the primary emphasis of the course.)
0	Information not collected, unavailable, or missing.
1	Skill, craftsmanship, or technique
2	Public performance/production (Students concentrate on technique, but may be required or strongly encouraged to participate in public performances or displays.)
3	Appreciation and/or evaluation of art form
4	History (and literature, if applicable) of art form(s)
5	Personal expression
6	Working as a group
7	Choreography/Composition
8	Combination
9	Other

EXAMPLE 3: PHYSICS IA

Classification Title		Common Fields				Subject Fields		
subject area	course title	level	credit	sequence term	yr	#1	#2	#3
17	31	3	0.50	1	0	1	2	2

One last course example should sufficiently illustrate how the different subject areas dictate the meaning of the codes within the subject fields. In the example above-Physics IA-the coding of the common fields denotes the following:

Within the Life and Physical Sciences subject area,	(subject area=17)
it fits the description of the classification title Physics-First Year,	(course title=31 within subject area #17)
is taught at a regular level,	(level=3)
awards one-half Carnegie unit of credit, and	(credit=0.50)
is the first term in a multi-term sequence of Physics courses.	(sequence=10)

The 122 code in the subject fields indicates that a science graduation requirement will be fulfilled upon successful completion; the courses does not require laboratory experimentation; and basic computational skills will be used. In the Life and Physical Sciences subject area, the three subject fields refer to Type of Credit, Lab Experience, and Level of Math. As with the other academic subject areas, this particular sequence of subject fields with their associated meanings is unique to the Life and Physical

Sciences subject area. The subject field codes and meanings are provided in the following tables.

Table 14 - Classification codes and meanings for the first subject field in Life and Physical Sciences: Type of credit

Codes	Code meanings
	(If the district or state requires certain types of credit for high school graduation, indicates the type of credit that students receive upon completing the course.)
0	Information not collected, unavailable, or missing.
1	Science credit
2	Social Studies credit
3	Fine Arts/Humanities credit
4	Vocational credit
5	Dual credit (in Social Studies and another subject area)
6	Student choice (Student may choose between two or more types of non-elective credit to be received upon successful completion of the course)
7	Other type of credit
8	Elective credit

Table 15 - Classification codes and meanings for the second subject field in Life and Physical Sciences: Lab experience

Codes	Code meanings
	(Indicates the participatory, hands-on laboratory experience received by students. If possible, use the higher codes to indicate the frequency of laboratory experimentation.)
0	Information not collected, unavailable, or missing.
1	Regular laboratory experiments are integral to the course.
2	Laboratory experimentation is not required nor integral.
3	Less than 50 percent of the course is spent on laboratory experiments.
4	About 50 percent of the course is spent on laboratory experiments.
5	More than 50 percent of the course is spent on laboratory experiments.

Table 16 - Classification codes and meanings for the third subject field in Life and Physical Sciences: Level of math

Codes	Code meanings
	(Indicates the level of math used within the course.)
0	Information not collected, unavailable, or missing.
1	No math
2	Basic computational skills (addition, subtraction, multiplication, division)
3	Algebraic skills or higher level math

As is evident from the three examples provided above, the specific subject fields for academic courses vary with each subject area. However, the fields generally convey three types of information. These types of information are: the type of credit awarded for the course, or whether the course fulfills a graduation requirement; information regarding course content; and the main emphasis of the course or to the intended student experience. Table 17 presents an overview of the type of information conveyed by the subject fields for each academic subject area. For more specific subject field codes and meanings, turn to the appropriate subject area in Chapter 2. The rest of this section contains a brief discussion of the academic subject fields.

Table 17 - Academic subject areas and type of information conveyed by their subject fields

Subject area	Subject field #1 *Type of Credit*	Subject field #2 *Content*	Subject field #3 *Focus/Emphasis*
Elective Activities	(blank)	(blank)	(blank)
English Language and Literature	Type of Credit	Writing Opportunity	Prose Mastery
Fine and Performing Arts	Type of Credit Auditions	Primary Emphasis	
Foreign Language and Literature	Type of Credit	(blank)	Language Attainment
Health and Safety Education	Graduation Requirement	Human Physiology	Human Sexuality
Life and Physical Sciences	Type of Credit	Lab Experience	Level of Math
Mass Communication	Type of Credit	Focus	Production
Mathematics	Type of Credit	Scope of Course	Calculator/ Computer Use
Military Science	Type of Credit	Branch of Service	(blank)
Multi/Inter-disciplinary Studies	Subject Studied	Subject Studied	Subject Studied

Physical Education	Type of Credit	Health Component	Human Sexuality
Religious Education and Theology	Type of Credit	Doctrine	Community Service
Social Sciences and History	Type of Credit	Frequency of Writing	Primary Sources
Special/Exceptional Education	(blank)	(blank)	Course Target

END NOTES

1 (Popup)
From the Perkins Act, Title III, Part E, Section 347:
"The term 'tech-prep education program' means a combined secondary and postsecondary program which-
(A) leads to an associate degree or 2-year certificate;
(B) provides technical preparation in at least 1 field of engineering technology, applied science, mechanical, industrial, or practical art or trade, or agriculture, health, or business;
(C) builds student competence in mathematics, science, and communications (including through applied academics) through a sequential course of study; and
(D) leads to placement in employment."